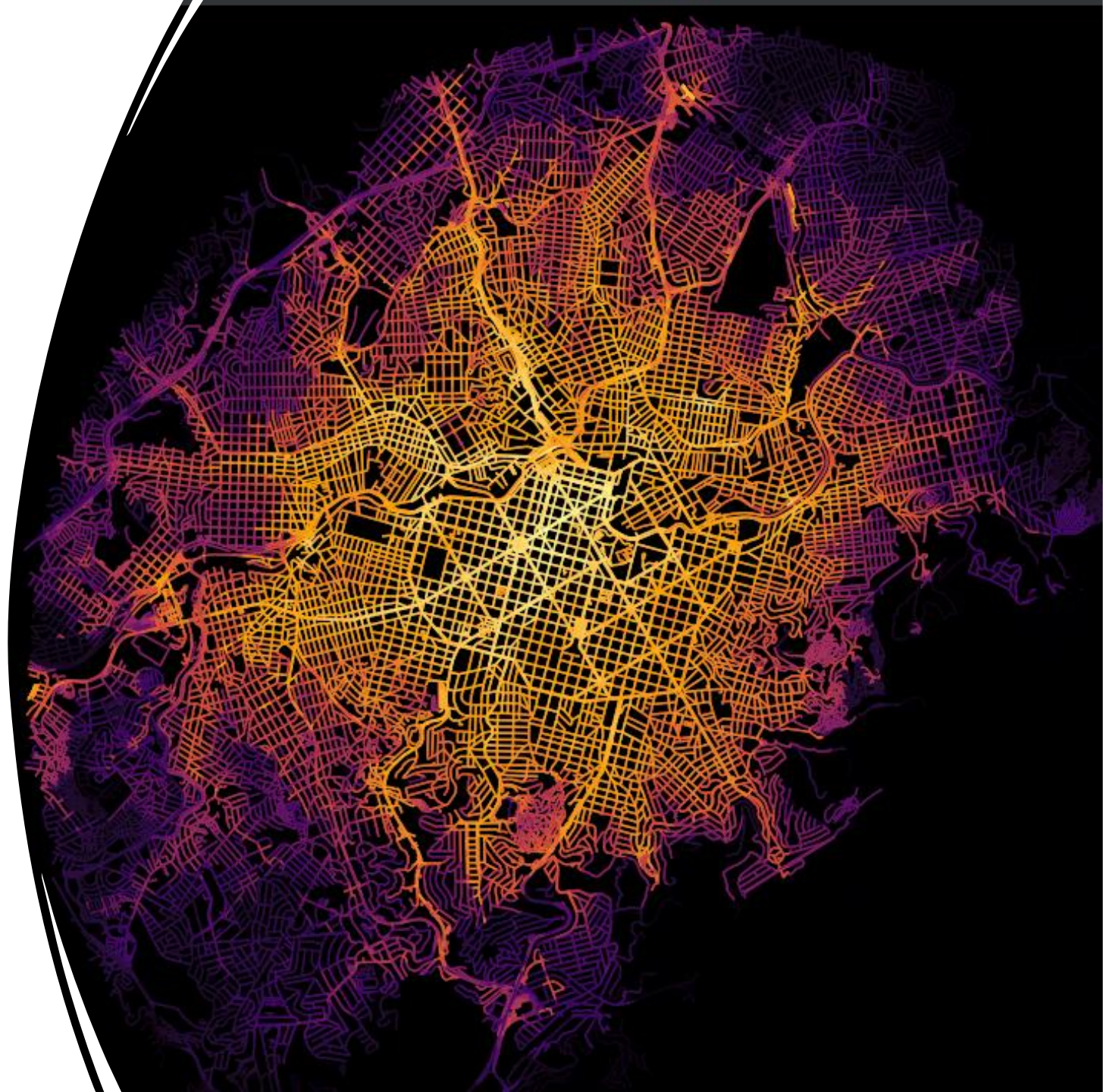
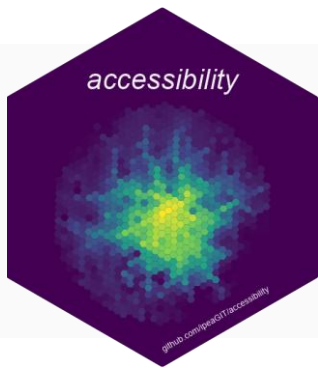


# Accessibility inequality and poverty





# **accessibility**: transport accessibility metrics

CRAN 1.4.0

downloads 15K

GitHub code

<https://ipeagit.github.io/accessibility>

## Inequality indicators:

- `concentration_index()`
- `gini_index()`
- `palma_ratio()`
- `theil_t()`

## Poverty indicators:

- `fgt_poverty()`

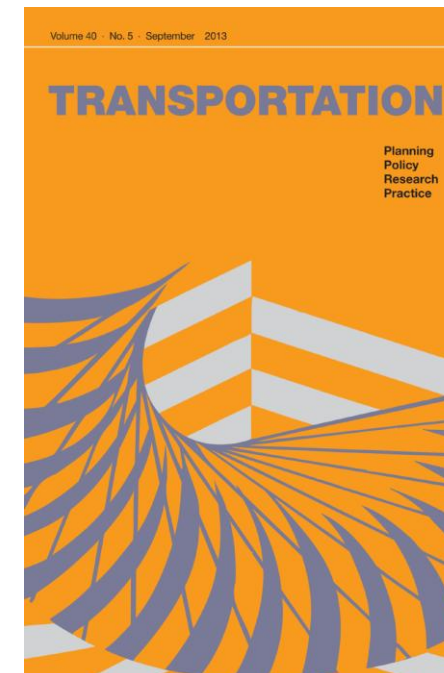
All 3 Foster-Greer-Thorbecke (FGT) poverty measures



Karner, A., Pereira, R. H., & Farber, S. (2024). **Advances and pitfalls in measuring transportation equity.** [Transportation](#)

## Inequality indicators:

1. ~~Gini index~~ it ignores groups' rankings\*
2. Theil index ! only Ok for categorical groups\*
3. Palma ratio ignores variations within groups
4. Concentration index
  - Same intuition as Gini/Lorenz \*but\* population along the x-axis is ordered by a socioeconomic variable
  - Varies from -1 to 1







Karner, A., Pereira, R. H., & Farber, S. (2024). **Advances and pitfalls in measuring transportation equity.** [Transportation](#)

## FGT family of **Poverty** indicators:

$FGT_0$  : **extent** of poverty

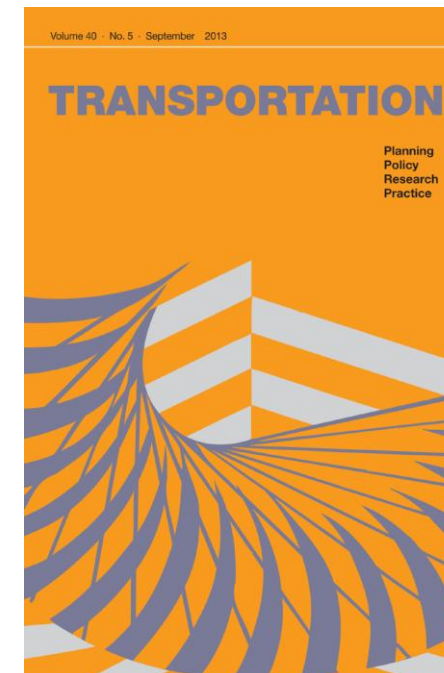
Number of people below poverty line

$FGT_1$  : **severity** of poverty

Average percent distance between the poverty line and the accessibility of individuals below it

$FGT_2$  : **extent** and **severity**

The number of people below the poverty line weighted by the size of the accessibility shortfall (higher weight on the poverty of the poorest)



**Lets' code**



[Link](#) to replex with sample data

# A crash course on Urban accessibility with R

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 @UrbanDemog